

What is claimed is:

1. An optical information recording medium comprising a recording film capable of information recording and reproduction by means of a laser beam, wherein said recording film has a plurality of crystalline particles and an intergranular phase present at the boundary between said crystalline particles, wherein said crystalline particles have an average particle diameter of 5 - 50 nm and a standard deviation of particle diameters is not more than 10% of the average particle diameter and said crystalline particles comprise V oxide, Mn oxide, Fe oxide, or Cu oxide.
2. An optical information recording medium according to claim 1, wherein said crystalline particles are selected from the group consisting of V_2O_5 , Mn_2O_3 , $Fe_2O_3(\gamma)$, and CuO particles.
3. An optical information recording medium according to claim 2, wherein said crystalline particles undergo phase transformation between V_2O_5 and V_2O_3 .
4. An optical information recording medium according to claim 2, wherein said crystalline particles undergo phase transformation between Mn_2O_3 and Mn_3O_4 .
5. An optical information recording medium according to claim 2, wherein

said crystalline particles undergo phase transformation between $\text{Fe}_2\text{O}_3(\gamma)$ and $\text{Fe}_2\text{O}_3(\alpha)$.

6. An optical information recording medium according to claim 2, wherein said crystalline particles undergo phase transformation between CuO and Cu_2O .

7. An optical information recording device which comprises a recording film and an optical head, said recording film being capable of information recording and reproduction by means of a laser beam and comprising a plurality of crystalline particles and an intergranular phase present at the boundary between said crystalline particles, wherein said crystalline particles have an average particle diameter of 5 - 50 nm and a standard deviation of particle diameters is not more than 10% of the average particle diameter and said crystalline particles comprise V oxide, Mn oxide, Fe Oxide, or Cu oxide, said optical head supplying said recording film with near-field light so processed as to have a diameter smaller than the wavelength of said laser beam.

8. An optical information recording medium according to claim 7, wherein said crystalline particles are selected from the group consisting of V_2O_5 , Mn_2O_3 , $\text{Fe}_2\text{O}_3(\gamma)$, and CuO particles.

9. An optical information recording medium according to claim 8, wherein said crystalline particles undergo phase transformation between V_2O_5 and V_2O_3 .

10. An optical information recording medium according to claim 8, wherein said crystalline particles undergo phase transformation between Mn_2O_3 and Mn_3O_4 .

11. An optical information recording medium according to claim 8, wherein said crystalline particles undergo phase transformation between $Fe_2O_3(\gamma)$ and $Fe_2O_3(\alpha)$.

12. An optical information recording medium according to claim 8, wherein said crystalline particles undergo phase transformation between CuO and Cu_2O .